

**AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the application.

**Listing Of Claims**

1. (Original) A method of growing a semiconductor layer structure, the method comprising the steps of:

growing a first (Al,Ga)N layer over a substrate at the first substrate temperature by MBE using ammonia as the nitrogen precursor;

cooling the substrate to a second substrate temperature lower than the first substrate temperature, while maintaining the supply of ammonia to the substrate;

growing an (In,Ga)N quantum well structure over the first (Al,Ga)N layer by MBE using ammonia as the nitrogen precursor;

heating the substrate to a third substrate temperature higher than the second substrate temperature, while maintaining the supply of ammonia to the substrate; and

growing a second (Al,Ga)N layer over the quantum well structure at the third substrate temperature by MBE using ammonia as the nitrogen precursor.

2. (Original) A method as claimed in claim 1 wherein the first (Al,Ga)N layer has a first conductivity type.

3. (Original) A method as claimed in claim 2 wherein the second (Al,Ga)N layer has a second conductivity type different from the first conductivity type.

4. (Original) A method as claimed in claim 3 wherein the first (Al,Ga)N layer is doped n-type and the second (Al,Ga)N layer is doped p-type.
5. (Previously Presented) A method as claimed in claim 1 wherein the first substrate temperature is within the range 850°C to 1050°C.
6. (Previously Presented) A method as claimed in claim 1 wherein the second substrate temperature is within the range 650°C to 1000°C.
7. (Previously Presented) A method as claimed in claim 1 wherein the third substrate temperature is within the range 850°C to 1050°C.
8. (Previously Presented) A semiconductor layer structure grown by a method as defined in claim 1.
9. (Previously Presented) A semiconductor light-emitting device comprising a semiconductor layer structure grown by a method as defined in claim 1.
10. (Original) A semiconductor device as claimed in claim 9 wherein the device is a light-emitting diode.